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NOTICE OF ALLOWANCE AND FEE(S) DUE

23373

7590

08/04/2008

SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037 EXAMINER

MISLEH, JUSTIN P

ART UNIT PAPER NUMBER

2622 DATE MAILED: 08/04/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699.795	11/04/2003	Nereo Pallaro	O78233	3993

TITLE OF INVENTION: MULTIFUNCTIONAL INTEGRATED VISUAL SYSTEM WITH CMOS OR CCD TECHNOLOGY MATRIX

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	11/04/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where ar in m

appropriate. All further correspondence including the Patent, advance orders and notification indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new of maintenance fee notifications. CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address) 23373 7590 08/04/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800				on of maintenance fees will be mailed to the current correspondence address as a correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission. Certificate of Mailing or Transmission I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.			
							(Signature)
							(Date)
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTO	R	ATTORNEY DOCKET NO.		CONFIRMATION NO.
10/699,795	11/04/2003		Nereo Pallaro			Q78233	3993
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nonprovisional	NO	\$1440	\$300	\$ 0		\$1740	11/04/2008
EXAM	MINER	ART UNIT	CLASS-SUBCLASS	7			
	JUSTIN P	<u>1</u> 2622	348-294000	_			
CFR 1.363). Change of corresp Address form PTO/S "Fee Address" inc PTO/SB/47; Rev 03-4 Number is required. 3. ASSIGNEE NAME A PLEASE NOTE: Un	AND RESIDENCE DATA less an assignee is ident th in 37 CFR 3.11. Comp	"Indication form ned. Use of a Customer A TO BE PRINTED ON ified below, no assignee	2. For printing on the (1) the names of up or agents OR, alternal (2) the name of a sing registered attorney or 2 registered patent att listed, no name will b THE PATENT (print or to data will appear on the DT a substitute for filing at (B) RESIDENCE: (CIT	to 3 registered pate tively, gle firm (having as agent) and the nan corneys or agents. If e printed. gype) patent. If an assign assignment.	a memb a memb nes of u no nan	oer a 2 up to ne is 3 dentified below, the do	cument has been filed for
Please check the appropr	riate assignee category or	categories (will not be p	rinted on the patent):	Individual C	orporat	ion or other private gro	up entity 🚨 Government
4a. The following fee(s) are submitted: ☐ Issue Fee ☐ Publication Fee (No small entity discount permitted) ☐ Advance Order - # of Copies ☐ Change in Entity Status (from status indicated above)			4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) A check is enclosed. Payment by credit card. Form PTO-2038 is attached. The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number (enclose an extra copy of this form).				
_ 。 .	ns SMALL ENTITY statu	,	☐ b. Applicant is no lo	nger claiming SMA	LL EN	TITY status. See 37 CF	R 1.27(g)(2).
NOTE: The Issue Fee ar interest as shown by the	nd Publication Fee (if req records of the United Sta	uired) will not be accepte tes Patent and Trademarl	ed from anyone other than k Office.	the applicant; a reg	istered	attorney or agent; or the	e assignee or other party in
Authorized Signature	,			Date			
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This collection of inform an application. Confider submitting the complete this form and/or suggest Box 1450, Alexandria, V Alexandria, Virginia 22	ntiality is governed by 35 dapplication form to the ions for reducing this but Virginia 22313-1450. DC	CFR 1.311. The informati i U.S.C. 122 and 37 CFR e USPTO. Time will vary rden, should be sent to the O NOT SEND FEES OR	on is required to obtain or 1.14. This collection is e y depending upon the ind he Chief Information Offic COMPLETED FORMS	retain a benefit by stimated to take 12 ividual case. Any c cer, U.S. Patent and TO THIS ADDRES	the pub minute ommen Trader S. SEN	olic which is to file (and s to complete, including ts on the amount of tin mark Office, U.S. Depa D TO: Commissioner f	by the USPTO to process) g gathering, preparing, and ne you require to complete rtment of Commerce, P.O. or Patents, P.O. Box 1450,

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

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10/699,795	11/04/2003	Nereo Pallaro	Q78233	3993	
23373 75	590 08/04/2008		EXAM	INER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W.			MISLEH, JUSTIN P		
			ART UNIT	PAPER NUMBER	
SUITE 800 WASHINGTON, 1	DC 20037		2622 DATE MAILED: 08/04/200	8	

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 734 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 734 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

		C					
	Application No. Applicant(s)						
Notice of Allowability	10/699,795 Examiner	PALLARO ET AL. Art Unit					
, rouse of , morrasmy	Examine	Altonic					
	JUSTIN P. MISLEH	2622					
The MAILING DATE of this communication appears on the cover sheet with the correspondence address All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.							
1. X This communication is responsive to Amendment filed Apri	<u>il 10, 2008</u> .						
2. \square The allowed claim(s) is/are $\underline{1-7}$, 9, 10, 12 – 15, 17 – 23, 2 17, 21, 22, 10, 11, 18, 19, and 12.	25, and 26 (now respectively renumb	ered 1 – 5, 7, 6, 8, 9, 13 – 15, 20, 16,					
 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some* c) None of the: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)). * Certified copies not received: Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. 							
 THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. 							
 5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted. (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) hereto or 2) to Paper No./Mail Date (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 							
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in the							
6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.							
Attachment(s) 1. ☐ Notice of References Cited (PTO-892) 2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	5. ☐ Notice of Informal Pa 6. ☐ Interview Summary Paper No./Mail Date 7. ☑ Examiner's Amendm 8. ☑ Examiner's Stateme 9. ☐ Other	(PTO-413), e					

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EXAMINER'S AMENDMENT

1. An Examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

2. Authorization for this Examiner's amendment was given in a telephone interview with

Brian Hannon on 28 July 2008.

3. The application has been amended as follows:

CLAIMS

Please cancel Claims 8, 11, 16, and 24.

Please replace remaining Claims 1-7, 9, 10, 12-15, 17-23, 25, and 26 with the

following:

"1. A visual system, comprising:

a CCD or CMOS matrix having a sensitive area, and

a plurality of optical devices with different directions, fields of view or modes of optical

separation,

wherein said sensitive area of the matrix is divided into a plurality of separated sub-areas

designed for different specific functions, a first part of said plurality of separated sub-areas being

dedicated to scene monitoring and a second part part of said plurality of separated sub-areas

being dedicated to detection of environmental parameters, said division being achieved by said

plurality of optical devices,

wherein a fog function is performed in one of the dedicated sub-areas in the second part with an active technique for local fog detection, and in one of the dedicated sub-areas in the first part with passive technique for fog bank detection.

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- 2. The visual system according to claim 1, wherein the system is installed in a motor vehicle on a front portion of an inner rear-view mirror of the motor vehicle, and wherein additional sub-areas in the second part perform rain detection, windscreen misting detection, and dusk detection, respectively.
- 3. The visual system according to claim 1, wherein the matrix is a linear or logarithmic, monochromatic or color VGA CMOS matrix.
- 4. The visual system according to claim 1, wherein at least one of the sub-areas in the first part is designed for front monitoring.
- 5. The visual system according to claim 1, wherein one of the sub-areas in the second part is for rain and misting detection.
- 6. The visual system according to claim 1, wherein one of the sub-areas in the first part is for meeting detection.
- 7. The visual system according to claim 5, wherein the sub-area dedicated to rain and misting detection includes an emitter.
- 9. The visual system according to claim 1, wherein one of the sub-areas in the second part is for a dusk function.
- 10. The visual system according to claim 4, wherein the at least one sub-area dedicated to front monitoring also performs a tunnel function.

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12. A visual system, comprising:

a CCD or CMOS color or monochromatic matrix having a sensitive area, and

a plurality of optical devices with different directions, fields of view or modes of optical

separation,

wherein said sensitive area of the matrix is divided into a plurality of separated sub-areas

designed for different specific functions, a first part of said plurality of separated sub-areas being

dedicated to scene monitoring and a second part of said plurality of separated sub-areas being

dedicated to detection of environmental parameters, said division being achieved by said

plurality of optical devices,

wherein a vehicle meeting function is performed by one of the sub-areas in the first part

by using an optical filter laid with a discretization degree at a pixel level.

13. A visual system, comprising:

a CCD or CMOS matrix having a sensitive area, and

a plurality of optical devices with different directions, fields of view or modes of optical

separation,

wherein said sensitive area of the matrix is divided into a plurality of separated sub-areas

designed for different specific functions, a first part of said plurality of separated sub-areas being

dedicated to scene monitoring and a second part of said plurality of separated sub-areas being

dedicated to detection of environmental parameters, said division being achieved by said

plurality of optical devices,

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wherein the matrix has a protection window made of one of glass and transparent plastic, the protection window acting as support for one or more optical fibers and a prism, the one or more optical fibers carrying to selected sub-areas of the matrix an optical signal.

14. The visual system according to claim 13, wherein said optical fibers have proximal ends fitted into holes made into said protection window.

15. A visual system, comprising:

a CCD or CMOS matrix having a sensitive area,

a plurality of optical devices with different directions, fields of view or modes of optical separation, wherein said sensitive area of the matrix is divided into a plurality of separated subareas designed for different specific functions, a first part of said plurality of separated sub-areas being dedicated to scene monitoring and a second part of said plurality of separated sub-areas being dedicated to detection of environmental parameters, said division being achieved by said plurality of optical devices, one of said sub-areas in the first part being dedicated to front monitoring and others of said sub-areas in the second part being dedicated to rain, misting, fog and dusk functions, and

an optical insulation between the first and second parts, the optical insulation partially covering a surface of a matrix protection window, on a side towards the matrix, with a layer of absorbing or reflecting material.

17. The visual system according to claim 13, wherein a sub-area dedicated to a rain function receives the optical signal from an optical system comprising, in series, the prism with an optical insulation, a filter and an objective with an optical axis orthogonal to a windscreen.

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18. The visual system according to claim 13, wherein a sub-area dedicated to a windscreen misting function receives the optical signal from an optical system comprising, in series, the prism with an optical insulation, a filter and an objective with an optical axis orthogonal to a windscreen.

- 19. A visual system, comprising:
- a CCD or CMOS matrix having a sensitive area, and
- a plurality of optical devices with different directions, fields of view or modes of optical separation,

wherein said sensitive area of the matrix is divided into a plurality of separated sub-areas designed for different specific functions, a first part of said plurality of separated sub-areas being dedicated to scene monitoring and a second part of said plurality of separated sub-areas being dedicated to detection of environmental parameters, said division being achieved by said plurality of optical devices, wherein one of the sub-areas in the second part is dedicated to a dusk function and receives an optical signal through an optical fiber.

- 20. A visual system, comprising:
- a CCD or CMOS matrix having a sensitive area, and
- a plurality of optical devices with different directions, fields of view or modes of optical separation,

wherein said sensitive area of the matrix is divided into a plurality of separated sub-areas designed for different specific functions, a first part of said plurality of separated sub-areas being dedicated to scene monitoring and a second part of said plurality of separated sub-areas being dedicated to detection of environmental parameters, said division being achieved by said

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plurality of optical devices, wherein one of the sub-areas in the first part is dedicated to tunnel function and receives an optical signal through an objective dedicated also to a front monitoring function.

- 21. The visual system according to claim 1, wherein the sub-area dedicated to the fog function, based on the active technique, receives an optical signal through an optical system comprising one of a ball and grin lens, an optical fiber, a high-pass or interferential filter, and a collection lens.
- 22. The visual system according to claim 21, wherein the sub-area dedicated to the fog function, based on the passive technique, receives the optical signal through an objective dedicated also to a front monitoring function.
- 23. The visual system according to claim 13, wherein two sub-areas dedicated to a vehicle meeting function receive the optical signal through filters together with an objective.
- 25. The visual system according to claim 13, wherein a sub-area dedicated to a front monitoring function receives the optical signal through an objective with an optical axis shifted with respect to the center of the matrix.
- 26. The visual system according to claim 1, wherein some sub-areas are reserved for unused pixels to provide separation between used sub-areas."

Allowable Subject Matter

- 4. Claims 1 7, 9, 10, 12 15, 17 23, 25, and 26 (now respectively renumbered 1 5, 7, 6, 8, 9, 13 15, 20, 16, 17, 21, 22, 10, 11, 18, 19, and 12) are allowed.
- 5. The following is an Examiner's statement of reasons for allowance:

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For **Claims 1 and 12**, the closest prior art discloses a visual system installed on an inner rear-view mirror of a vehicle, wherein the visual system includes an image sensor having subareas dedicated to specific functions and the image sensor for use in a vehicle visual system, wherein the image sensor has several sub-areas dedicated to specific functions including front monitoring, and wherein the sub-areas dedicated to front monitoring may also be used for tunnel detection and a dusk function.

However, the closest prior art does not teach or fairly suggest wherein a fog function is performed both with a dedicated sub-area, with an active technique for local fog detection, and with passive technique for fog bank detection in another sub-area corresponding to the one dedicated to front monitoring or contained therein or wherein a vehicle meeting function is performed by one of the sub-areas in the first part by using an optical filter laid with a discretization degree at a pixel level.

For **Claims 13, 15, 19, and 20**, the closest prior art discloses a visual system installed on an inner rear-view mirror of a vehicle, wherein the visual system includes an image sensor having sub-areas dedicated to specific functions and the image sensor for use in a vehicle visual system, wherein the visual system includes a protection housing for supporting a lens system.

However, the closest prior art does not teach or fairly suggest wherein the matrix sensor has a protection window made of glass or transparent plastic, also acting as support for one or more optical fibers and a prism carrying to selected sub-areas of the matrix an optical signal picked up by the prism

6. Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

Allowance."

Conclusion

7. Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The

Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's

supervisor, Sinh Tran can be reached on 571.272.7564. The fax phone number for the

organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Justin P. Misleh/

Primary Examiner

Group Art Unit 2622

August 4, 2008